

# Algebra

September 24th (Tue)

## 9:00–12:00

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|----|---|---|---|----|
| 1  | Yasutoshi Nomura  | * | On divisibility of differences of binomial coefficients . . . . .   | 10 |
| 2  | Fuminori Kawamoto (Gakushuin Univ.)<br>Yasuhiro Kishi (Aichi Univ. of Edu.)<br>Hiroschi Suzuki (Nagoya Univ.)<br>Koshi Tomita (Meijo Univ.) | # | Continued fraction expansions with even period and primary symmetric parts with extremely large end . . . . .         | 15 |
| 3  | Fuminori Kawamoto (Gakushuin Univ.)<br>Yasuhiro Kishi (Aichi Univ. of Edu.)<br>Hiroschi Suzuki (Nagoya Univ.)<br>Koshi Tomita (Meijo Univ.) | # | Construction of primary symmetric parts of extremely large end . . . . .  | 15 |
| 4  | Soichi Ikeda (Nagoya Univ.)<br>Kaneaki Matsuoka (Nagoya Univ.)<br>Yoshikazu Nagata (Nagoya Univ.)   | * | Mean values of the double zeta function . . . . .   | 10 |
| 5  | Shin-ya Koyama (Toyo Univ.)<br>Fumika Suzuki<br>(Univ. of British Columbia)   | # | The deep Riemann hypothesis for Selberg zeta functions . . . . .  | 10 |
| 6  | Yoshikatsu Yashiro (Nagoya Univ.)   | # | Mertens' theorem and prime number theorem for Selberg class . . . . .   | 10 |
| 7  | Takahiro Wakasa (Nagoya Univ.)  | * | Explicit supremum of the function $S_1(t)$ in short intervals on the Riemann Hypothesis . . . . .                     | 10 |
| 8  | Tomokazu Onozuka (Nagoya Univ.)   | # | The asymptotic behavior of multiple zeta-functions at non-positive integers . . . . .                                 | 10 |
| 9  | Takuya Okamoto (Ritsumeikan Univ.)<br>Tomokazu Onozuka (Nagoya Univ.)   | # | Mean value theorems for the Mordell–Tornheim double zeta-function . . . . .   | 15 |
| 10 | Ryo Tanaka (Nagoya Univ.)   | # | Functional equations for general multiple zeta functions including Hurwitz–Lerch and Mordell–Tornheim types . . . . . | 15 |
| 11 | Daisuke Shiomi (Yamagata Univ.)   | * | Non-ordinary cyclotomic function fields . . . . .   | 10 |
| 12 | Takeshi Kurosawa (Tokyo Univ. of Sci.)  | # | Transcendence of infinite products with Fibonacci numbers . . . . .   | 10 |
| 13 | Yohei Tachiya (Hirosaki Univ.)  | # | Irrationality of Lambert series associated with periodic sequence . . . . .   | 10 |

## 14:15–16:45

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|----|---|---|---|----|
| 14 | Hirofumi Nagoshi (Gunma Univ.)  | * | Independence of $L$ -functions and the Nevanlinna characteristic . . . . .  | 10 |
| 15 | Hidehiko Mishou (Tokyo Denki Univ.)<br>Hirofumi Nagoshi (Gunma Univ.) | * | Examples of any number of automorphic $L$ -functions with joint universality property . . . . .   | 10 |
| 16 | Takehito Yoshiki (Univ. of Tokyo)                                     | # | A general formula for the discriminant of polynomials over $\mathbb{F}_2$ determining the parity of the number of prime factors . . . . . | 10 |
| 17 | Keisuke Arai (Tokyo Denki Univ.)                                      | * | Non-existence of elliptic points on Shimura curves of $\Gamma_0(p)$ -type . . . . .   | 15 |
| 18 | Kenichi Shimizu<br>(Kenmei Girls' Junior and Senior High School)      | * | Imaginary quadratic fields whose exponents are equal to two . . . . .   | 10 |

- 19 Jerome T. Dimabayao (Kyushu Univ.)<sup>#</sup> On the vanishing of cohomologies of  $p$ -adic Galois representations associated with elliptic curves ..... 15
- 20 Yuken Miyasaka (Tohoku Univ.)<sup>#</sup> Honda theory for formal groups of abelian varieties over  $\mathbb{Q}$  of  $GL_2$ -type ..... 10
- 21 Hiroshi Sakata (Waseda Univ. Senior High School)<sup>\*</sup> A remark on the trace formula for Jacobi forms of prime power level ..... 15
- 22 Hirotaka Kodama (Kinki Univ.)<sup>#</sup> A congruence property of a Siegel cusp form of odd weight ..... 10  
Shoyu Nagaoka (Kinki Univ.)
- 23 Takao Watanabe (Osaka Univ.)<sup>\*</sup> A construction of fundamental domains for arithmetic quotients of reductive algebraic groups ..... 10
- 24 Kohei Katata (Ehime Univ.)<sup>\*</sup> On Ramanujan circulant graphs ..... 15  
Miki Hirano (Ehime Univ.)  
Yoshinori Yamasaki (Ehime Univ.)

**17:00–18:00 Talk invited by Algebra Section**

- Yuval Flicker (Ohio State Univ./Ariel Univ.)<sup>#</sup> Counting local systems via automorphic forms

September 25th (Wed)

**9:00–12:00**

- 25 Hidefumi Ohsugi (Rikkyo Univ.)<sup>#</sup> Quadratic toric ideals and quadratic Gröbner bases of graphs ..... 15  
Akihiro Shikama (Osaka Univ.)  
Kenta Nishiyama (Univ. of Shizuoka)  
Takayuki Hibi (Osaka Univ.)
- 26 David A. Cox (Amherst College)<sup>#</sup> Some invariants on normality of dilated polytopes ..... 15  
Christian Haase (Goethe-Universität Frankfurt)  
Takayuki Hibi (Osaka Univ./JST CREST)  
Akihiro Higashitani (Osaka Univ.)
- 27 Akihiro Higashitani (Osaka Univ.)<sup>#</sup> Ehrhart polynomials of reflexive polytopes and orthogonal polynomial systems ..... 15
- 28 Hiroyasu Takeda (Hokkaido Univ.)<sup>#</sup> For Hilbert basis of semi-group ring associated with the main diagonal sum model ..... 15
- 29 Masahide Konishi (Nagoya Univ.)<sup>#</sup> A classification of cyclotomic KLR algebras of type  $A_n^{(1)}$  ..... 15
- 30 Hirotaka Higashidaira (Meiji Univ.)<sup>#</sup> Sequentially Cohen–Macaulay bipartite graphs and cycle graphs ..... 10
- 31 Kyouko Kimura (Shizuoka Univ.)<sup>\*</sup> Arithmetical rank of Gorenstein squarefree monomial ideals of height three ..... 15  
Naoki Terai (Saga Univ.)
- 32 Masataka Tomari (Nihon Univ.)<sup>\*</sup> On Demazure’s construction of finite Abelian coverings of normal graded rings ..... 15
- 33 Yusuke Nakajima (Nagoya Univ.)<sup>#</sup> Dual  $F$ -signature of Cohen–Macaulay modules over cyclic quotient surface singularities ..... 15
- 34 Manabu Matsuoka (Osaka Shoin Women’s Univ.)<sup>\*</sup> Rings with direct summand conditions and linear codes ..... 10

- 35 Noritsugu Kameyama (Shinshu Univ.)<sup>#</sup> Constructions of Auslander–Gorenstein local rings ..... 10  
 Mitsuo Hoshino (Univ. of Tsukuba)  
 Hirotaka Koga (Univ. of Tsukuba)

### 13:15–14:15 Talk invited by Algebra Section

- Shunsuke Takagi (Univ. of Tokyo)<sup>#</sup> F-singularities and singularities in the minimal model program

September 26th (Thu)

### 9:00–11:25

- 36 Sho Matsuzawa (Shizuoka Univ.)<sup>#</sup> Classification of 3-dimensional quadratic AS-regular algebras ..... 10  
 Gahee Kim (Shizuoka Univ.)  
 Hidetaka Matsumoto (Shizuoka Univ.)
- 37 Kenta Ueyama (Shizuoka Univ.)<sup>#</sup> Finite Cohen–Macaulay representation type and noncommutative graded isolated singularities ..... 15
- 38 Takahiko Furuya (Meikai Univ.)<sup>#</sup> Some self-injective algebras with finite Hochschild cohomology ..... 10  
 Takao Hayami (Hokkai-Gakuen Univ.)
- 39 Hirotaka Koga (Univ. of Tsukuba)<sup>#</sup> Finiteness of selfinjective dimension and associated invariants under derived equivalences ..... 15
- 40 Daiki Obara (Tokyo Univ. of Sci.)<sup>#</sup> One point extension of a quiver algebra defined by two cycles and a quantum-like relation ..... 10
- 41 Yasuhiko Takehana<sup>#</sup> A generalization of Goldie torsion theory ..... 10  
 (Hakodate Nat. Coll. of Tech.)
- 42 Ryo Kanda (Nagoya Univ.) Atom spectrum and classification of subcategories ..... 15
- 43 Kenichi Shimizu (Nagoya Univ.)<sup>#</sup> Canonical pivotal objects in finite tensor categories ..... 15
- 44 Hiroaki Komatsu<sup>\*</sup> A characterization of coseparable corings by generalized coderivations ..... 10  
 (Okayama Pref. Univ.)
- 45 Yuji Tsuno (Chiba Inst. of Tech.)<sup>\*</sup> Central cleft extensions for free Hopf algebras ..... 15

### 11:30–12:00 Research Section Assembly

### 14:15–16:00

- 46 Takashi Niwasaki (Ehime Univ.)<sup>\*</sup> A characterization of exceptional 2-groups by the numbers of the endomorphisms ..... 10  
 Tsunenobu Asai (Kinki Univ.)
- 47 Akihiko Hida (Saitama Univ.)<sup>\*</sup> On the mod  $p$  cohomology of the extraspecial  $p$ -group and the action of the double Burnside algebra ..... 10
- 48 Shigeo Koshitani (Chiba Univ.) The Alperin weight conjecture and Broue conjecture in modular representation theory ..... 15  
 Radha Kessar (City Univ. London)  
 Markus Linckelmann  
 (City Univ. London)
- 49 Shigeo Koshitani (Chiba Univ.) Broue’s abelian defect group conjecture for finite sporadic simple groups ..... 15  
 Jürgen Müller (RWTH Aachen Univ.)  
 Felix Noeske (RWTH Aachen Univ.)

50	Takanori Sakamoto (Fukuoka Univ. of Edu.) Masanobu Honda (Nigata Univ. of Pharm. & App. Life Sci.)	* Some properties of factorized Lie algebras . . . . .	10
51	Masanari Okumura (Univ. of Tokyo) ‡	Vertex algebras and the equivariant Lie algebroid cohomology . . . . .	15
52	Kazuya Kawasetsu (Univ. of Tokyo) *	The intermediate vertex subalgebras of the lattice vertex operator algebras . . . . .	15
<b>16:15–17:15 Talk invited by Algebra Section</b>			
	Masahiko Miyamoto (Univ. of Tsukuba) ‡	On orbifold conjecture about vertex operator algebras	

## September 27th (Fri)

**9:30–12:00**

53	Hiroko Yanaba (Hiroo Gakuen) ‡ Inoru Shioya (Hiroo Gakuen)	On pseudo primes . . . . .	10
54	Shigeru Iitaka (Gakushuin Univ.*) ‡	Hartshorne’s identities and their applications 2 . . . . .	15
55	Kenta Watanabe (Osaka Univ.) *	On extensions of a double covering of plane curves and Weierstrass semigroups of the double covering type . . . . .	10
56	Masaaki Homma (Kanagawa Univ.) ‡	Numbers of points of surfaces in the projective 3-space over finite fields . . . . .	15
57	Shinya Kitagawa (Gifu Nat. Coll. of Tech.) *	On certain pencils of plane curves of degree thirteen with a quintuple point and nine quadruple points II . . . . .	15
58	Shingo Taki (Tokyo Denki Univ.) *	On Oguiso’s $K3$ surface . . . . .	15
59	Humihiko Watanabe (Kitami Inst. of Tech.) *	Twisted cohomology groups associated to configuration of two theta divisors on Jacobian variety of dimension 2 . . . . .	10
60	Hiromu Tanaka (Kyoto Univ.)	Cone theorem and minimal models for threefolds in positive characteristic . . . . .	15
61	Katsuhisa Furukawa (Waseda Univ.) ‡	Cohomological characterization of hyperquadrics of odd dimensions in characteristic two . . . . .	15
62	Michio Amano ‡	On the kernels of certain homomorphisms of the Witt vectors . . . . .	10

**14:15–15:30**

63	Aiichi Yamasaki (Kyoto Univ.) ‡	Rationality of $z^2 = P(x)y^2 + Q(x)$ . . . . .	10
64	Tatsuki Hayama (National Tsing Hua Univ.) ‡	Boundary component structure of period domains . . . . .	15
65	Tomohiro Iwami (Kyushu Sangyo Univ.) *	A Variant of Iskovskikh’s rationality criterion for conic bundles in the case of polarized (log) pairs . . . . .	10
66	Roberto Muñoz (Univ. Rey Juan Carlos) Gianluca Occhetta (Univ. di Trento) Luis Eduardo Solá Conde (Univ. Rey Juan Carlos) Kiwamu Watanabe (Saitama Univ.) Jarek Wiśniewski (Warsaw Univ.)	Rational curves, Dynkin diagrams and Fano manifolds with nef tangent bundle . . . . .	15

- 67 Kazunori Yasutake (Meiji Univ.)\* On Fano  $n$ -folds with nef vector bundle  $\Lambda^3 T_X$  having a birational contraction ..... 10
- 68 Sinichi Matsumura (Kagoshima Univ.)# A Nadel vanishing theorem for metrics with minimal singularities on big line bundles ..... 10

**15:45–16:45 Talk invited by Algebra Section**

- Yoshiaki Fukuma (Kochi Univ.)# A study on the dimension of global sections of adjoint bundles by invariants of quasi-polarized varieties